

What is claimed is:

1. An inkjet type fabric printing apparatus, comprising:

an inkjet head that ejects ink onto a fabric, the inkjet head reciprocally moving in main scanning direction and auxiliary scanning direction relative to the fabric;

a platen that holds the fabric to extend on a plane substantially parallel with the main scanning direction and the auxiliary scanning direction with a first predetermined distance spaced from the inkjet head; and

a positioning member on which the fabric is set, the fabric being positioned on the platen in place in a direction parallel with the main scanning direction and the auxiliary scanning direction, at least one of a neck portion and a shoulder portion being thicker than a portion of the closing spread on the platen, the positioning member supporting the at least one of the neck portion and the shoulder portion of the fabric such that the at least one of the neck portion and a shoulder portion is spaced from the inkjet head by a second predetermined distance at which the at least one of the neck portion and the shoulder portion does not hinder the movement of the inkjet head.

2. The inkjet type fabric printing apparatus according to claim 1, wherein the positioning member comprises a guide

plate mounted on an undersurface of the platen with a portion thereof being protruded on a front side of the platen which is one end side in the auxiliary scanning direction of the platen.

3. The inkjet type fabric printing apparatus according to claim 2, wherein the guide plate is mounted on the platen such that a protruded amount of the guide plate is changeable.

4. The inkjet type fabric printing apparatus according to claim 2, wherein the guide plate is formed symmetric with respect to a centerline thereof which extends in the auxiliary scanning direction.

5. The inkjet type fabric printing apparatus according to claim 2, wherein a front end side of the guide plate protruding from the platen has an arc-shaped side.

6. The inkjet type fabric printing apparatus according to claim 2, wherein a front end side of the guide plate protruding from the platen has a V-shaped side.

7. The inkjet type fabric printing apparatus according to claim 2, wherein a front end side of the guide plate is

formed such that a central portion of the front end side is protruded further than end portions of the front end side, the neck portion of the fabric being supported at the central portion, the shoulder portions of the fabric being supported at corners defined at the end portions of the front end side of the guide plate.

8. The inkjet type fabric printing apparatus according to claim 2, wherein at least the front end side of the guide plate has a dulled edge which prevents the fabric from suffering damage from the guide plate.

9. The inkjet type fabric printing apparatus according to claim 8, wherein the dulled edge of the guide plate has a rounded surface.

10. The inkjet type fabric printing apparatus according to claim 1, wherein edges of sides of the platen are formed to prevent the fabric from floating up from the platen in a vicinity of the edges.

11. The inkjet type fabric printing apparatus according to claim 10, wherein the edges of the sides of the platen are formed so that the fabric gradually bends downward along the edges.

12. The inkjet type fabric printing apparatus according to claim 11, wherein each of the edges of the sides of the platen has a rounded surface.

13. The inkjet type fabric printing apparatus according to claim 1, wherein the inkjet head is configured to move reciprocally in the main scanning direction, and wherein the platen is configured to move in the auxiliary scanning direction synchronously with the movement of the inkjet head.

14. An inkjet type fabric printing apparatus, comprising:  
an inkjet head that ejects ink onto fabric, the inkjet head reciprocally moving in main scanning direction and auxiliary scanning direction relative to the fabric;

a first platen that holds first shape fabric to extend in the main scanning direction and the auxiliary scanning direction to allow the inkjet head to print an image on the first shape fabric; and

a second platen that holds second shape fabric which is different from the first shape fabric to extend in the main scanning direction and the auxiliary scanning direction to allow the inkjet head to print an image on the second shape fabric.

15. The inkjet type fabric printing apparatus according to claim 14, wherein the second shape fabric is smaller than the first shape fabric.

16. The inkjet type fabric printing apparatus according to claim 14, wherein the second platen is arranged to hold a pocket formed on the fabric.

17. The inkjet type fabric printing apparatus according to claim 14, wherein one end, in the auxiliary scanning direction, of the first platen is formed to have a V-shaped side, at least one of a neck portion and a shoulder portion of the first size fabric being supported by the V-shaped side such that the first size fabric is positioned on the first platen in place.

18. The inkjet type fabric printing apparatus according to claim 14, wherein one end, in the auxiliary scanning direction, of the second platen is formed to have a V-shaped side to allow the second size fabric to be smoothly set on the second platen.

19. The inkjet type fabric printing apparatus according to claim 14, wherein the second platen is detachably mounted on the first platen.

20. The inkjet type fabric printing apparatus according to claim 19, wherein the first platen is provided with an indication that indicates a position on the first platen at which the second platen is mounted.

21. The inkjet type fabric printing apparatus according to claim 19, wherein the inkjet type fabric printing apparatus includes a plurality of second platens different from each other, the plurality of second platens being selectably mounted on the first platen.

22. The inkjet type fabric printing apparatus according to claim 21, wherein a reference point is defined on each of the second platen, the reference point serving as an origin for determining a position of an image to be printed on the second size fabric, each of the second platens being configured such that the reference point is located at a fixed point relative to the first platen when the second platen is mounted on the first platen at the same position.

23. The inkjet type fabric printing apparatus according to claim 22, wherein the position on the first platen at which each of the plurality of second platens is to be mounted is indicated with an indication formed on the first platen.

24. The inkjet type fabric printing apparatus according to claim 21, further comprising a sensor system that identifies a type of each of the second platens.

25. The inkjet type fabric printing apparatus according to claim 24, wherein each of the second platens include a portion indicating the type of the second platen.

26. The inkjet type fabric printing apparatus according to claim 24, wherein a location on which an image is to be printed on the second type fabric is determined based on the type of the second platen detected by the sensor system.

27. The inkjet type fabric printing apparatus according to claim 24, wherein a size of an image to be printed on the second type fabric is determined based on the type of the second platen detected by the sensor system.

28. The inkjet type fabric printing apparatus according to claim 19, the second platen being provided with:

- (a) a work plate on which the second size fabric is to be set;

- (b) a mounting portion configured to be detachably coupled to the first platen; and

(c) a supporting plate, the work plate being fixed on the mounting portion with the supporting plate placed therebetween, a space being formed between the work plate and the mounting portion, a portion of the second size fabric being received by the space formed between the work plate and the mounting portion.

29. The inkjet type fabric printing apparatus according to claim 28, wherein the supporting plate supports the work plate at an end portion of the work plate.

30. The inkjet type fabric printing apparatus according to claim 28, wherein the mounting portion includes a clamping mechanism.

31. The inkjet type fabric printing apparatus according to claim 19, further comprising a height adjusting mechanism arranged to support the first platen at a first height and a second height,

wherein, when the first platen supported at the first height, the first shape fabric is held at a predetermined distance spaced from the inkjet head suitable for printing, and

wherein, when the second platen is mounted on the first platen supported at the second height, the second



shape fabric is held at the predetermined distance spaced from the inkjet head.

32. The inkjet type fabric printing apparatus according to claim 31, wherein the height adjusting mechanism includes a supporting member having a first face that supports the first platen at the first height and a second face that supports the first platen at the second height, the supporting member being operable to selectively support the first platen with one of the first and second faces.

33. The inkjet type fabric printing apparatus according to claim 32,

wherein the supporting member is a hollow cylinder supported to be rotatable around a center axis thereof, the cylinder having an end face facing the first platen and provided with a notch, and

wherein the end face serves as the first face while the notch serves as the second face.

34. The inkjet type fabric printing apparatus according to claim 33, wherein the cylinder is provided with a lever radially extending therefrom, the lever allowing the cylinder to be manually rotated.

35. The inkjet type fabric printing apparatus according to claim 19, wherein the second platen having a clamping mechanism that mounts the second platen on the first platen.

36. The inkjet type fabric printing apparatus according to claim 19, wherein the first platen and the second platen are exchangeable.

37. The inkjet type fabric printing apparatus according to claim 36, further comprising a platen supporting mechanism that exchangeably supports the first platen and the second platen, each of the first and second platens being provided with a shaft extending downward from an undersurface thereof, the platen supporting mechanism including a hollow cylinder that allows the shaft to be detachably inserted thereinto.

38. The inkjet type fabric printing apparatus according to claim 36, wherein the second platen is configured to have a plurality of platens integrally arranged as a single member.

39. The inkjet type printing apparatus according to claim 14, wherein the second platen is provided with a sensor that detects presence/absence of a fabric on the second platen.

40. The inkjet type fabric printing apparatus according to claim 29, further comprising a controller that controls the actuation of the inkjet head,

wherein the controller allows the inkjet head to start printing only when the sensor has detected the presence of a fabric.

41. An inkjet type fabric printing apparatus, comprising:

an inkjet head that ejects ink onto a fabric, the inkjet head reciprocally moving in main scanning direction and auxiliary scanning direction relative to the fabric;

a first platen that holds first shape fabric to extend in the main scanning direction and the auxiliary scanning direction to allow the inkjet head to print an image on the first shape fabric; and

a plurality of second platens, each of which holds second shape fabric which is different from the first shape fabric to extend in the main scanning direction and the auxiliary scanning direction to allow the inkjet head to print an image on the second shape fabric.

42. The inkjet type fabric printing apparatus according to claim 41, wherein each of the second platens is detachably mounted on the first platen.

43. The inkjet type fabric printing apparatus according to claim 42, wherein the first platen is provided with a plurality of indications that indicate positions, on the first platen, at which respective ones of the second platens are to be mounted.

44. The inkjet type fabric printing apparatus according to claim 43, wherein the multiple marks are arranged in the main scanning direction.

45. The inkjet type fabric printing apparatus according to claim 43, wherein the multiple marks are arranged in the auxiliary scanning direction.

46. The inkjet type fabric printing apparatus according to claim 42, further comprising a height adjusting mechanism arranged to support the first platen at a first height and a second height,

wherein, when the first platen is supported at the first height, the first shape fabric is held at a predetermined distance spaced from the inkjet head suitable for printing, and

wherein, when the second platen is mounted on the first platen supported at the second height, the second

shape fabric is held at the predetermined distance spaced from the inkjet head.

47. The inkjet type fabric printing apparatus according to claim 41,

wherein each of the second platens is provided with a sensor that detects presence/absence of a fabric.

48. The inkjet type fabric printing apparatus according to claim 47, wherein the inkjet head is controlled to print images only on the second platens of which sensor has detected the presence of the fabric.

49. The inkjet type fabric printing apparatus according to claim 41, further comprising a controller that operates the inkjet head to execute printing, the controller including a memory for storing images to be printed on fabric set on the second platens,

wherein the controller receives a single image from an external apparatus, the controller copying the received image to locations on the memory corresponding to the plurality of second platens, the controller operating the inkjet head according to the data stored in the memory to print the copied images on the fabric set on each of the plurality of second platens.

50. The inkjet type fabric printing apparatus according to claim 49, further comprising sensor systems detecting presence/absence of fabric on each of the second platens, the controller copying the received image only to locations on the memory corresponding to the second platens detected, based on outputs of the sensor systems, to hold the fabric.

51. The inkjet type fabric printing apparatus according to claim 41, wherein the first platen is provided with a slit formed between adjacent two of the second platens arranged in the auxiliary scanning direction on the first platen, the slit allowing the fabric set on one of the two second platen to extend down through the slit below the first platen.

52. The inkjet type fabric printing apparatus according to claim 41, wherein the plurality of second platens are arranged at least in the auxiliary scanning direction.

53. The inkjet type fabric printing apparatus according to claim 41, wherein the plurality of second platens include at least one pair of second platens.

54. The inkjet type fabric printing apparatus according to

claim 53, wherein the at least one pair of second platens are arranged in the main scanning direction, the at least one pair of second platens having symmetric shapes.

55. The inkjet type fabric printing apparatus according to claim 53, wherein each of the at least one pair of second platens hold a pair of pieces of fabric to be used in pairs.

56. The inkjet type fabric printing apparatus according to claim 55, wherein the pair of pieces of a fabric to be used in pairs including at least one of a pair of gloves or a pair of socks.

57. The inkjet type fabric printing apparatus according to claim 53, further comprising a controller that operates the inkjet head to print images, the controller including a memory for storing images to be printed on the second size fabric, the controller receiving a single image from an external apparatus, the controller copying the received image to a location on the memory corresponding to one of the pair of the second platens while copying a mirror image of the received image to a location on the memory corresponding to the other one of the pair of second platens, the inkjet head being operated, according to the data stored in the memory, to print on the pair of pieces

of second shape fabric held by the pair of second platens.

58. An inkjet type fabric printing apparatus, comprising:

an inkjet head that ejects ink onto a fabric, the inkjet head reciprocally moving in main scanning direction and auxiliary scanning direction relative to the fabric;

a platen that holds the fabric to extend on a plane substantially parallel with the main scanning direction and the auxiliary scanning direction with a first predetermined distance spaced from the inkjet head; and

a positioning member on which the fabric is set, the fabric being positioned on the platen in place in a direction parallel with the main scanning direction and the auxiliary scanning direction, the positioning member supporting at least one of a neck portion and a shoulder portion of the fabric such that the at least one of the neck portion and a shoulder portion is spaced from the inkjet head by a second predetermined distance.

59. An inkjet type fabric printing apparatus for printing an image on a predetermined area of a fabric, comprising:

an inkjet head that ejects ink, the inkjet head reciprocally moving in main scanning direction and auxiliary scanning direction relative to the fabric;

a platen that holds the fabric to extend on a plane



substantially parallel with the main scanning direction and the auxiliary scanning direction with a first predetermined distance spaced from the inkjet head; and

a positioning portion integrally formed on the platen, the positioning portion supporting the a reference portion of the fabric such that the fabric is held on the platen in place in a direction parallel with the main scanning direction and the auxiliary scanning direction, the reference portion being thicker than the other portion including the predetermined area, the positioning portion supporting the fabric such that the reference portion is spaced from the inkjet head by a second predetermined distance at which the reference portion does not hinder the movement of the inkjet head.